

# BEST PRACTICES FOR WATER QUALITY TRADING

## JOINT REGIONAL AGREEMENT

### Draft Best Practice, ~~May 9~~June 26<sup>th</sup>, 2013

This *Draft Best Practice* document was ~~derived~~ based on discussion at the April 9<sup>th</sup> and 10<sup>th</sup> workshop. It is intended to represent apparent points of consensus among the ~~group~~attendees as to how each component of trading should operate. A number of the “draft best practices” reflect the 2003 U.S. EPA Trading Policy, and so where there is overlap, reference has been made to the policy. Many other draft best practices highlight the additional best practices or implementation elements recommended by the project partners. There are areas where the language provided below goes beyond the discussions in April, these additions are offered as suggestions to move the conversation forward and will be refined or removed through future review and comments. In many cases, areas for additional investigation were identified and have been listed here. As this additional research and discussion progresses, the practices are likely to be expanded. When acceptable to all parties, the Draft Best Practice will be posted on the web. ~~Come November, or other agreed upon consensus point, Draft Best Practice documents may be changed to Pilot Best Practices~~These “draft best practices” only represent recommendations. Inclusion of these practices in the JRA will not result in implementation. Participating states may choose to incorporate these draft best practices into their own trading program rules or guidance.

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Each section includes **1)** a descriptive name of the best practice component and its definition (where applicable), **2)** proposed language for the draft best practice, **3)** commentary describing important considerations associated with the best practice, derived from agency comments and workshop discussions, and **4)** a list of those areas that will be addressed through further research, conversation with agency staff, and discussion through the Interagency Workshop series.

**Please review the and return comments by Thursday, May 24th**

Please direct feedback, questions, and comments to:

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## 1. Eligibility for Water Quality Trading

Trading is not appropriate for every watershed or in every situation. EPA's 2003 Trading Policy identifies some specific conditions under which trading may occur. The sections below describe ~~some of the minimum principles and the project partners' proposed eligibility~~ criteria for eligibility that individuals and entities seeking to participate in trading and generate credits ~~must meet. This includes. These~~ criteria ~~for~~include those criteria already identified in EPA's trading policy. Recommendations below are based on the states' experiences with water quality trading to date, lessons from other areas of the country, and a pragmatic view of how trading should proceed in the Pacific Northwest given public budget constraints and environmental goals. Eligibility criteria cover topics such as regulatory trading environments, credit buyers, trading area, tradable pollutants, and actions that can generate credits.

### 1.1 Eligible regulatory trading environments

**Draft Best Practice – Eligible environments:** The 2003 EPA Trading Policy notes that trading may be used to maintain high quality waters, in pre-TMDL impaired waters, pursuant to TMDLs, in pretreatment situations, and intra-plant. 68 Fed. Reg. 1608, 1610-1611 (Jan. 13, 2003). Trades in the Northwest will be considered primarily pursuant to NPDES permit issuance or renewal in basins covered by total maximum daily loads (TMDLs). Subject to agency discretion and conformance with CWA regulations, trading may also occur ~~in~~outside of a TMDL under other types of permits or regulatory tools, including but not limited to, CWA section 401 certifications, stormwater permits, variances, or memorandums of agreement that allow a regulated entity to begin complying with TMDL objectives in advance of NPDES permit renewal.

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**Commentary:** To evaluate and approve proposed potential trades, EPA, state agencies, and regulated entities benefit from having several important pieces of information in place or in development.

~~Trading~~The project partners noted that although the 2003 EPA Policy allows for pre-TMDL trading, trading in a TMDL environment is preferred because agencies or the EPA will have developed ~~this information through the TMDL process, providing~~ scientifically-sound pollutant parameters and load allocations ~~through which to evaluate~~ trades ~~may be evaluated as part of the TMDL process.~~

Proposals for trading outside of or prior to the development of a TMDL may be evaluated on a case-by-case basis provided that a TMDL-comparable analysis is undertaken. This context is challenging for many state agencies, as the associated analysis would require large amounts of staff time and capacity, and is likely to strain already limited staff resources. In order for agencies to consider trading prior to or outside of a TMDL in water quality limited water bodies, the following issues and information need to be available for analysis:

1. It is possible to identify pollutants, pollutant forms and sources, and the relative contribution of pollution by each source. This analysis needs to be performed by the agency, permittee, or a qualified third party;
2. Agencies, permittees, or a qualified third party have assessed alternatives available for pollution reduction, including available control technologies (and the costs associated with reducing such pollutants via technology);
3. Agencies have access to review any analysis completed by a permittee or external third-party;

4. Important areas for water quality improvement have been identified within the watershed to avoid localized impacts and maximize targeted water quality benefits;
5. Parties understand that trading provisions are subject to change when a TMDL is written, and so trading participants must understand the long-term implications if and when a TMDL is approved.

#### Areas for Additional Investigation:

- What is the review process for an analysis completed by an entity outside of the water quality agency?
- How can stable state funding for trade related analyses be developed alongside these draft best practices?

**Draft Best Practice - Compliance with anti-degradation policy:** Water quality trades and trading programs comply with the federal anti-degradation laws and state implementing rules, as stated in the 2003 EPA Trading Policy.

**Commentary:** Water quality trading programs must, at a minimum, EPA's 2003 Trading Policy states: "Trading should be consistent with applicable water quality standards, including a state's and tribe's antidegradation policy established to maintain and protect existing uses in impaired waters. Instream water uses and the level of water quality necessary to support them, as well as high quality waters, states cannot further degrade water quality unless found necessary to accommodate important economic or social development in the area. In state designated "and outstanding natural resources waters," water quality must be maintained and protected without exception. In the 2003 Trading Policy, national resource waters (40 CFR 131.12). EPA recommends states adopt a provision in their anti-degradation that state or tribal antidegradation policies stating that include provisions for trading in high quality waters can't occur without anti-degradation requiring antidegradation review. for high quality waters. EPA asserts does not believe that WQT trades and trading programs will not result in "lower water quality" for high quality waters quality' as that term is used in 40 CFR 131.12(a)(2), or that antidegradation review would be required under EPA's regulations when the trades or trading programs achieve a no net increase of the pollutant traded and do not result in any impairment of designated uses." 68 Fed. Reg. at 1611.

**Draft Best Practice – Compliance with anti-backsliding policy:** Except as stated in the 2003 EPA Trading Policy, except where allowed under the CWA, NPDES permits, TMDLs, and water quality standards cannot be renewed, reissued, modified, or revised as a result of water quality trading to include less stringent effluent limitations, wasteload allocations, or water quality standards than those previously achieved.

#### Commentary:

#### Areas for Additional Investigation: none

**Commentary:** EPA's 2003 Trading Policy states: "EPA believes that the antibacksliding provisions of Section 303(d)(4) of the CWA [33 U.S.C. § 1313] will generally be satisfied where a point source increases its discharge through the use of credits in accordance with alternate or variable water

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**Commented [Schary1]:** Why does this need to be a best practice if we are just repeating what is already required in EPA's Trading Policy? Again, we need to just focus on what's new & improved.

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**Commented [Schary2]:** Same as previous comment.

quality based effluent limitations contained in an NPDES permit, in a manner consistent with provisions for trading under a TMDL, or consistent with the provisions for pre-TMDL trading included in a watershed plan. These antibacksliding provisions will also generally be satisfied where a point source generates pollution reduction credits by reducing its discharge below a water quality based effluent limitation (WQBEL) that implements a TMDL or is otherwise established to meet water quality standards and it later decides to discontinue generating credits, provided that the total pollutant load to the receiving water is not increased, or is otherwise consistent with state or tribal antidegradation policy.” 68 Fed. Reg. at 1611. Entities engaged in trading must also abide by the antibacksliding provision in section 402(o) of the CWA (33 U.S.C. § 1342(o)), where applicable.

## 1.2. Eligible credit buyers

**Draft Best Practice:** *Provided that it is in compliance with applicable federal and state technology-based effluent limits, mixing zone requirements, and permit conditions, a point source may obtain credits to achieve water quality based effluent limits (WQBELs) from a nonpoint or point source seller of credits. Trading may not be used by point sources to achieve new or revised technology-based effluent guidelines or regulations unless explicitly authorized by state and/or EPA regulations.*

**Commentary:** There are three types of water quality trades described in US EPA’s 2003 Trading Policy: point-point trades, point-nonpoint trades, and nonpoint-nonpoint trades. The focus of this JRA’s research and work JRA is primarily on point-nonpoint trades. Each permittee or buyer must meet certain, nonnegotiable conditions pursuant to state and federal law and guidance before they may be eligible to purchase credits. **Point**

EPA’s 2003 Trading Policy recommends that “states and tribes consider the role of compliance history in determining source eligibility to participate in trading.” 68 Fed. Reg. at 1612. In general point sources should be in compliance with their current permit and/or any agency-approved schedule for compliance for the pollutant desired for trading. Trading may not be an option for a facility with a history of repeated, significant violations (e.g. criminal violations/convictions). Trading can be used to help a facility, with an otherwise good track record for compliance, come into compliance with a specific permit limit targeted by a trade (e.g. nutrient or temperature exceedences). In those cases, trading would need to be authorized under a particular enforcement agreement.

Prior to trading, a point source should must also demonstrate that it is not creating near-field or localized impacts, except as allowed in regulatory mixing zones. Acute criteria must be met after the zone of initial dilution, and chronic criteria must be met after the end of the larger regulatory mixing zone. Trades must also not lead to degradation of state groundwater quality standards. “EPA does not support any trading activity that would exceed an acute aquatic life criteria within a mixing zone or a chronic aquatic life or human health criteria at the edge of a mixing zone using design flows specified in the water quality standards.” 68 Fed. Reg. at 1610. Trades must also avoid degrading groundwater in violation of state water quality standards. Finally, EPA does not support trading to meet TBELs unless explicitly authorized in 40 C.F.R. § 420.03.

## Areas for Additional Investigation:

### Commented [CS3]: Dru Keenan

1) I think what should be covered here/emphasized is the facility’s compliance history. We have experience with a number of facilities that have miserable compliance histories and they are the ones that should not be allowed to trade. On the other hand, if the compliance issue is specific with not being able to meet the specific permit limit that is the subject of a trade and they have a very good track record but for their temperature limit or nutrient limit – then that should not disqualify them for a trade. Therefore, the facility needs to be one that has everything else under control – other limits, monitoring, reporting, being current with reapplying for permits before they can be eligible for consideration of WQT. Another eligibility requirement should be the facility’s level of sophistication – we know of numerous facilities that just aren’t capable of doing complicated work (too small to support, poor, etc) should not be eligible to trade because I doubt they wouldn’t be able to manage the complexities.  
2) WQT can’t be used to meet technology based limits.  
3) Additional ideas for eligibility criteria: permit may not be expired (a little inside baseball issue, but I can explain what this means if necessary); if the facility is struggling to meet ELGs/TBELs, then it shouldn’t be eligible for trading

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**Commented [BC4]:** Is this the right way to get at allowing trades from permittees with good compliance history? Or would we be barring those who want to use trading to get back into compliance?

- Additional investigation and discussion is needed on the compliance status that an NPDES permittee must have before they can be eligible to purchase credits.
- Further discussion is needed on any additional requirements that may apply before a buyer can participate in trading (e.g. compliance record).

### 1.3. Trading area

Trading areas define the geographical boundaries within which buyers and sellers can ~~conduct trades~~. For example, a pound of phosphorous removed in the Boise River Basin is not the same as a pound of phosphorous removed in the Yakima River ~~trade~~.

**Draft Best Practice:** “All water quality trading should occur within a watershed or a defined area for which a TMDL has been approved.” 68 Fed. Reg. at 1610. Within this hydrologically connected area, trades, by default, should occur upstream of a point of compliance, ideally in conformance with a point of compliance defined in the TMDL. Additionally, trades must occur within waters listed for the same beneficial use(s) as the waters into which the point source is discharging (e.g. if the pollutant is temperature for rearing salmonids - the trade must benefit rearing salmonids in the same watershed).

**Draft Best Practice:** Trades, by default, should occur upstream of a point of compliance, ideally in conformance with a point of compliance defined in the TMDL. Trading area boundaries should also be defined to preclude all localized impacts.

#### Commentary:

**Commentary:** “Establishing defined trading areas that coincide with a watershed or TMDL boundary results in trades that affect the same water body or stream segment and helps ensure that water quality standards are maintained or achieved throughout the trading area and contiguous waters.” 68 Fed. Reg. at 1610. Economically, larger trading areas likely facilitate an increase in the number of potential buyers and sellers who may engage in trading. Ecologically, however, nonpoint source credit production should be sourced from areas that can best address needed water quality improvements. Point sources may choose to purchase credits within a smaller area than what is defined by a trading area for a variety of non-compliance related reasons (e.g., a city may prefer to buy credits within its boundaries for civic reasons; credits may be purchased from particular areas in high need of ecological improvement and investment). Whatever the size of the trading area, there needs to be a clear link between the credited pollution reduction and the permitted discharge ultimately using those credits.

#### Areas for Additional Investigation: none

### 1.4. Eligible pollutants for trading

**Draft Best Practice:** ~~Current~~, Currently eligible pollutants for trading include nutrients, oxygen-demanding parameters, sediment, and temperature. For each of these pollutants, the default units, pollutant form, and seasonality will be defined in a NPDES permit. Other eligible pollutants may be considered by EPA and the states for trading on a case-by-case basis.

#### Commented [CS5]: Dru Keenan

In addition to the discussion on boundaries, it must be clear, that the trade must be in waters with the same designated/beneficial use. For example if the pollutant is temperature for rearing salmonids - the trade must benefit rearing salmonids in the same watershed. Temperature is probably the most sensitive to this requirement but down the road other pollutants – use designation combinations may arise. The only reason why we have specific temperature criteria is to protect the specific use of various salmonid life stages.

**Commented [Schary6]:** This sentence bothered me because it put the emphasis on the wrong part – it should be talking about the necessity of hydrological connections rather than suggesting the nature of a pollutant varies watershed to watershed.

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**Commented [BC7]:** We added “currently” since there may be other pollutants eligible in the future (e.g. copper in stormwater).

**Commented [Schary8]:** EPA’s 2003 Trading Policy does not mention temperature, so a good reason to have a best practice on pollutants eligible for trading that isn’t redundant to EPA’s policy is to say the project partners would like to trade temperature in addition to what is already covered in EPA’s policy.

**Commentary:** Not all pollutants are eligible for trading pursuant to ~~US~~EPA's 2003 Trading Policy. 68 Fed. Reg. at 1609 (encouraging programs for nutrients, sediments and other pollutants). However, "EPA recognizes that trading of pollutants other than nutrients and sediments has the potential to improve water quality and achieve ancillary environmental benefits if trades and trading programs are properly designed." *Id.* at 1610. Because the 2003 EPA Trading Policy did not mention temperature, attendees believe that it is important to include temperature as an eligible pollutant in addition to what is already mentioned in EPA's policy. Most trading programs to date around the country have focused on phosphorous and nutrients, with temperature trades taking place primarily in the Pacific Northwest. ~~Attendees differed as to what they believed to~~ "Clearly defined units of trade are necessary for trading to occur. Pollutant specific credits are examples of tradable units for water quality trading. These may be ~~the~~ expressed in rates or mass per unit time as appropriate units for ~~trade~~ to be consistent with the time periods that are used to determine compliance with NPDES permit limitations or other regulatory requirements." 68 Fed. Reg. at 1612. Each trading program needs to define its own standardized units of trade. Attendees agreed that it would be difficult to set these standard units (e.g. a phosphorous credits is a pound of total phosphorous reduced per year— lbs TP/yr) at a regional scale because of differences in local watershed conditions and state water quality standards.

#### Areas for Additional Investigation:

- Additional discussion is needed to determine if the designation of "default unit" is appropriate. Situations should also be identified, if any, in which pollutant units, form, or seasonality would deviate from those set forth in an NPDES permit.

#### 1.5. Eligible credit-generating actions

**Draft Best Practice:** Conservation or management actions, known as best management practices (BMPs), that generate credits must be quantifiable and verifiable. A list of BMPs that are eligible for generating credits should be provided by the applicable state agency. Each BMP on the list should include a guideline that defines: A) an approved quantification method, B) the appropriate baseline condition to use for calculating the reduction, C) installation and maintenance quality standards, and D) ongoing performance standards to ensure that each BMP is consistently achieving the desired water quality improvements. Each agency will provide a standard process for approving new types of eligible BMPs.

~~**Draft Best Practice:** Conservation or management actions, known as best management practices (BMPs), that generate credits must be quantifiable and verifiable. A list of eligible, credit-generating BMPs should be provided by the applicable state agency. BMPs eligible for trading should include an approved quantification method, guidelines for installation and maintenance, and performance standards to ensure that each BMP is consistently achieving the desired water quality improvements. Each agency will provide a standard process for approving new types of eligible BMPs.~~

**Commentary:** ~~Similar to pollutants, not all BMPs may be eligible to generate credits and not~~Not all BMPs will be eligible to generate credits for all credit types or within all watersheds, ecological regions, and states a given pollutant, watershed, land use type, state, etc. Existing BMPs also vary in the specificity of guidance available for BMP design and maintenance and the accuracy of available

**Commented [CS9]:** Dru Keenan

With regard to BMPs - - for temperature - nps practices, may need to look beyond the ag agencies for bmps. There may be a need to bring habitat restoration expertise to help identify what needs to be restored.

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quantification methods. The development of a non-exhaustive list of eligible BMPs by agencies and the EPA will lend confidence to those actions that are approved to generate credits. Other components of BMPs will similarly be improved through such a process (e.g., criteria for effectiveness, design and maintenance standards, project implementation, and quality performance standards). —see Section 4 below for more. As guidelines are developed for new or additional BMPs achieve similar criteria and are submitted to agencies by trading participants, there should be a process in place for each agency to review, reject, or approve and add any such new BMPs. Determining baseline pollution reduction requirements and conditions for BMPs is discussed separately in Section 2.

**Areas for Additional Investigation:**

- Additional research and discussion is needed to develop a standard process and criteria for approving BMPs as eligible for trading.
- The project team will continue gathering information on BMPs that are currently approved for trading in Idaho, Oregon, and Washington, those that should be prioritized for inclusion once an approval process is in place, which should be excluded from any such list, and those that show promise, but for which additional information is needed.

**Commented [Schary10]:** We need to reference the baseline discussion that should be listed separately – either as a best practice or as an element that will be unique to each state. Baselines need to be consistent with the TMDL's Load Allocation, but how the Load Allocation is implemented and its schedule and plan for implementation is where some differences may arise that we need to discuss.



## 4. Project Implementation and Quality Assurance Standards

~~It is not enough simply to say that a best management practice (BMP) has been implemented. This~~  
section describes the standards that ensure the projects seeking ~~verification credits~~ are appropriate  
~~for crediting~~, were implemented to a high standard, were implemented in a way that achieves the  
credited water quality benefits for as long as the credit is valid, and are consistent with other laws.

**Commented [CS11]:** We agree. Sentence was deleted, reducing this introductory section to a description of what is included in this section.

### 4.1 Project screening/validation

Validation, the process of screening projects for program eligibility, can give the project developer, regulatory agency, and NPDES permittee a quick idea of whether the project will meet established eligibility criteria. Not all programs include this kind of screening. Validation can be required as part of a regulatory process, but more often, it is used to provide confidence that projects will generate valid credits later on.

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**Draft Best Practice:** A state agency or approved third party may screen a proposed project for eligibility. If eligibility screening occurs, and the screener determines that a proposed project will fail to meet ~~quality standards~~eligibility criteria, the screener will notify the project developer with recommendations for revision and instructions for resubmission of the project plan. As the project meets relevant eligibility criteria, the screener can provide a written notice of eligibility.

**Commentary:** Attendees noted that because developing a credit project can be costly, an initial site screening can provide an important risk mitigation benefit (providing the project developer, regulatory agency, and NPDES permittee with a quick idea of whether a site will meet established eligibility criteria). Attendees suggested that site screening should not be mandatory, but noted that it is generally a good idea before project implementation begins. It remains unclear who would conduct a site validation, as there are concerns about delegation of that role outside of state agencies and resource constraints for work conducted by state agencies.

### **Areas for Additional Investigation**

- Investigate ~~and add discussion of/discuss~~ the pros and cons of who conducts the validation—state, permittee, landowner, or a third party, including specific implications for EPA and the state agencies.
- Define a process by which a third party may gain designation and/or approval by the state agency to perform site validation.
- Continue discussion on whether or when validation should be a required step.

### 4.2 Consistency with other laws

**Draft Best Practice:** Prior to generating credits, a project developer must obtain all necessary permits and approvals (including those required under the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, state permitting laws, and county/municipal land use codes); and be deemed in compliance with all applicable federal, state, and local laws/regulations ~~that comprise~~  
~~regulatory baseline.~~

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**Commented [Schary12]:** This sounds different than the TMDL's baseline – when I don't think we mean it to. I would rather we keep our baseline language consistent, and reference EPA's Trading Policy whenever we can rather making up new definitions - unless it is to state something that is more stringent or specific than EPA's policy.

**Commentary:** Attendees discussed the scope of inquiry associated with validation. **Commentary:** There was a lot of discussion about whose responsibility it was to determine consistency with other laws, and how much proof of that consistency a project developer would need to provide. On the one hand, project developers should be able to demonstrate their knowledge of applicable laws and provide details on how they are in compliance. On the other, it is unclear what state water quality agency would do with this information, and how would they verify its accuracy given that many rules apply in different locales for different land uses. It remains unclear what level of self-validation project developers will provide/attest to at this step (or at the verification step), as several attendees raised concerns about validation leading to self-incrimination. Attendees also questioned if and how states may delegate the authority to make this compliance determination to a third party. Attendees agreed that further discussion on this matter is needed, as is a fuller discussion of whether this inquiry should occur at the validation or verification stage.

#### Areas for Additional Investigation

- Investigate options for different levels of assurance that Project Developers should provide that they are in compliance with all applicable laws (e.g. site-specific check-list, description, attestation), including legal implications of such attestations (i.e. self-incrimination of project developers).
- Understand if and how states may delegate authority to make this compliance determination to external third parties (and if not, what is the proper, legal scope of the validation/verification authority).

#### 4.3 Project implementation quality assurance

Most credit calculations are modeled assuming BMPs are performing at their best in reducing pollution. A trading program needs ~~quality standards to~~ guidelines for BMPs that shape design of a BMP and set performance standards to. Those guidelines make sure ~~that a~~ BMP is being operated and maintained appropriately, and in a way that meets the assumptions modeled in the credit calculation. ~~Quality standards~~ BMP guidelines are also a way to ensure that the actions taken on the ground are enhancing ecosystem function in a way that is ecologically responsible and contributes toward watershed health and resiliency (i.e. using native species in riparian forests instead of non-native hybrids).

**Draft Best Practice:** Each eligible BMP must be designed, constructed, and maintained using ~~quality standards~~ a BMP guideline defined and approved by the appropriate state agency. In general, those ~~quality standards~~ guidelines should build from NRCS-defined ~~guidelines~~ criteria. In cases where site-specific considerations necessitate a different design or maintenance standard, the project developer will work with the state water quality agency or their approved third party to approve a site-specific ~~quality standard~~ BMP guideline.

**Commentary:** Attendees discussed the need to balance flexibility in project implementation (allowing project developers to be responsive to changing farm practices and seasonally-specific BMPs) with the certainty and dependability of project quality that is required for trading to be a viable method of complying with load allocations. Additional time will be needed to further explore these topics.

#### Areas for Additional Investigation:

- Define a process for the review of BMPs for use in credit generation and the criteria on which they are evaluated.
- Investigate and provide the group with a comprehensive review of the BMPs currently approved or accepted for trading and their associated project implementation standards.

#### 4.4 Project management plans; 4.5 Project stewardship requirements

For most structural BMPs, there need to be some requirements for the management and stewardship/maintenance of the practice. This includes keeping the practice in place and ~~up to~~ quality standards consistent with BMP guidelines (e.g. maintaining fences, controlling weeds in riparian buffers, and other actions for the life of a credit). Stewardship has two components—protecting the underlying land use, and ensuring that stewardship/maintenance actions occur.

**Draft Best Practice – Project Management Plans:** *Project developers must develop (and submit as part of project verification) a project management plan that outlines specific improvement/restoration goals, a plan for site monitoring and maintenance actions, and performance milestones for ensuring that these goals are achieved in the future.*

**Commentary:** none

**Draft Best Practice – Ensure Project Site has Adequate Legal Protections for Duration of Credit Usage Period:** *Projects must contain adequate legal protections. These protections must remain in place for the duration of the credit usage period, be legally enforceable under relevant state laws, and run with the land (e.g. leases, conservation easements). Supplemental protections include performance bonds, restricted accounts, or insurance. Ideally, these protections will also protect against proximate disturbing land use activities.*

**Commentary:** none

**Draft Best Practice – Minimum Site Protection Time Period:** *For structural BMPs (e.g. fencing or riparian restoration), the minimum site protection length should be twenty (20) years. For management-based BMPs (e.g. cover crops and tillage), the minimum site protection length should be five (5) years. Any other irregular term may be applied at the discretion of the regulatory agency. Site protection will generally occur through limited-term leases or other contracts, although easements may be used if the benefits of a BMP are expected to be more permanent.*

**Commentary:** The ~~selected~~ protection lengths above were selected because water quality impacts (e.g. permitted point source discharges) are rarely permanent, and so it does not make sense to structure water quality improvement projects as permanent solutions. Standard contract lengths are preferable, but must be balanced with flexibility to adjust BMP selection based on crops grown, market conditions, and environmental conditions. In the event that the mixture of BMPs implemented at a site changes in a given year, this would trigger a re-calculation of credits and additional verification, which could increase transaction costs significantly. Shorter-term protections may be considered if supply constraints arise or regulated entities develop diversified credit portfolios. There are also significant learning curves and costs involved in the first year of a project generating credits. Even for management-based BMPs that can change year-to-year, a longer site-

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**Commented [Schary13]:** This is a confusing term – we need to define it so that it's not misunderstood. I think what you are really talking about is a minimum time period for a contract between the project developer and the landowner on whose property the project is being installed or implemented. Otherwise it sounds like a form of conservation easement or some other environmental protection instrument tied to the land. That is not what we mean, right?

protection ~~site~~ period seemed appropriate. If the 5-year period becomes a barrier to project developers bringing credits for sale, then that minimum length can be revisited.

~~Areas for Additional Investigation:~~ none

## 7. Verification and Certification & 8. Registration

~~Credit verification and certification are the final steps to ensure that proposed water quality credit projects are implemented according to specifications and have provided the necessary documentation. Public registration provides public disclosure, a mechanism to track credit quantity and ownership for compliance and enforcement, and a way to ensure that credits are not being used more than once.~~

### ~~7.1 – 7.2 Project site verifiers and verification~~

~~Many~~All permitted point sources have traditionally “self-verified” monitored” end-of-pipe discharge limits by submitting monitoring reports to the state agencies in charge of NPDES permit compliance and enforcement. With point-to-nonpoint trading programs, numerous nonpoint sources will provide the pollution reductions needed by a single point source to meet its requirements through dozens of different types of BMPs (each with its own eligibility and implementation quality standards). ~~This shift~~Because trading shifts the location of compliance from monitoring end-of-pipe discharges to documenting the efficacy of BMP implementation on a per-project basis ~~presents, there are~~ new challenges for ~~accurate reporting, compliance, and enforcement~~verifying water quality improvements over time.

Once a project has been implemented, but prior to being eligible to sell credits, someone must verify that the project was implemented consistent with established BMP guidelines, that eligibility documentation is in place, and that the credit estimate is accurate. This review process is known as credit verification. With all documentation in place, the final approval needed is called certification—review of verified credit estimates and all project documentation. Once verified and certified, the credits are registered. Public registration provides public disclosure, a mechanism to track credit quantity and ownership for compliance and enforcement, and a way to ensure that credits are not being used more than once.

### 7.1 - 7.2 Project site verifiers and verification

**Draft Best Practice – Verifiers:** Completed projects must be verified onsite by an independent third party, the permitted point source, or a state water quality agency as being in compliance with appropriate standards. Any point source or third party performing verification must develop a Verification Plan, which must be approved by the state or its approved third party. The Verification Plan must describe the proposed methods of verification, qualifications requirements for verifiers, and the verifier’s protections against conflicts of interest. Even where a state water quality agency does not perform the verification, it may choose to inspect a credit-generating project or trading program at any time.

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**Commented [CS14]:** Some portion of this may get moved to Compliance and Enforcement as we build out that section

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**Commentary:** Independent project verification provides significant programmatic integrity from the perspective of the general public (i.e. neutral review of quality and integrity), and from the perspective of permitted entities that rely on trading as a compliance solution. It also presents several challenges, including the ability of states to require verification; the question as to who will conduct the verification (and if not done by states, how to properly contract with private parties to perform this service). For an NPDES system where permittees currently do their own monitoring and verification for point source discharges, there remains a question about what guidelines should be followed for self-verification in a trading context. This includes some sideboards of what would need to be in a Verification Plan. Common verification architecture (e.g. verification protocols, training and accreditation services, contracting procedures and templates) in the region could ~~act~~make verification more efficient to maximize implement and enforce and easier for the use of agency resources, and public to encourage transparency understand.

**Draft Best Practice – Verifier qualifications:** *All verifiers must be qualified, trained, and accredited to inspect lands for particular credit-generating BMPs in a particular geography. Third party verifiers must be accredited by the relevant water quality agency or its approved third party.*

**Areas for additional investigation:**

- Legal implications of verification - what needs to be verified, what would be in violation if someone falsely verified, what penalties would be incurred, and how contract agreements between project developers and the buyer or third party verifiers can distribute liability.

**Draft Best Practice – Verifier qualifications:** *All verifiers must be qualified, trained, and accredited to inspect lands for particular credit-generating BMPs in a particular geography. Third party verifiers must be accredited by the relevant water quality agency or its approved third party.*

**Commentary:** Accreditation ensures that verifiers are properly suited to analyze a particular project. It is unclear whether accreditation will be afforded by the state agency or an approved third party. It is not clear whether accreditation would be needed if permittees are conducting verification of their own projects.

**Draft Best Practice – Content and frequency of verification:** *At a minimum, the project verifier confirms that credit generating projects are eligible, that estimated credit quantities are accurate, that BMP design is consistent with approved guidelines, and that the project developer has an adequate management plan and legal protection for the duration of the credit usage period. Ongoing credit verification occurs at least annually for the duration of the credit usage period (in some cases e.g. irrigation BMPs, verification may be required more frequently than annually). An onsite monitoring visit is required in years one and five as part of verification, and if the credit usage period is longer than five years, every five years through the remainder of the credit usage period. In years in which no onsite monitoring occurs, verification includes review of annual monitoring reports.*

**Draft Best Practice – Content and frequency of verification:** *At a minimum, the project verifier confirms that credit generating projects are eligible, that estimated credit quantities are accurate, that BMP design is consistent with approved quality standards, and that the project developer has an adequate management plan and legal protection for the duration of the credit usage period.*

**Commented [Schary15]:** This is a little vague, but I think what you really mean is that having common procedures for verification will make it more efficient to implement and enforce and for the public to understand. However, I think this is really a Clean Water Act issue (although I'm not a lawyer) as to what is being verified, what would be in violation if someone falsely verified, and what penalties would be incurred. The point source is still ultimately liable under the CWA, so the private contract terms with a third-party verifier would have to give the point source comfort that they are protected somehow. Aren't there other examples out there from other programs to look at besides water quality trading where states rely on independent verifiers?

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~~Ongoing credit verification occurs at least annually for the duration of the credit usage period (in some cases e.g. irrigation BMPs, verification may be required more frequently than annually). An onsite monitoring visit is required in years one and five as part of verification, and if the credit usage period is longer than five years, every five years through the remainder of the credit usage period. In years in which no onsite monitoring occurs, verification includes review of annual monitoring reports.~~

**Commentary:** none

#### Areas for additional investigation:

- Include additional time at a future workshop for discussion of the merits and scope of verification (e.g., who would conduct the verification -- state, permittee, landowner, or a third party), requirements for verification (e.g., standards, frequency, analysis and survey methods), and the resource implications for EPA and the state agencies;
- Agencies should reflect on how deeply they wish to engage in verification, or whether they would prefer to: (a) delegate verification to a third-party organization(s); (b) form a new organization/entity to oversee verification; (c) allow multiple organizations to perform verification functions; or (d) other. WP and TFT will consider the pros and cons of each for future option memos. WP will provide more information on how and where other states have taken on a greater role in developing verification and then delegated to others as programs have developed, along with successes and drawbacks;
- Disputes between third-party verifiers, project developers, and/or point and nonpoint sources may arise during the verification process (e.g., credit calculation disparities, quality standards, on-the-ground activities). State agencies should define and discuss the process for resolving disputes in the verification process.

**Commented [rln16]:** This is a significant issue and deserves additional commentary either in each section or as an introductory paragraph.

**Commented [CS17]:** Rane, we intend to cover this through a discussion guide and discussion in workshop #3 and will incorporate after that.

### 7.3 Certification

Credit certification is the final step before a credit can be used, and includes a confirmation that all necessary paperwork and documentation are in place to support the quantity of credits proposed for registration. This does not refer to the approval of a trade or the transfer of credits between parties.

~~**Draft Best Practice:** The relevant water quality agency or its approved third party provides a formal written certification of credits from individual projects, including confirmation that verification has occurred, a review of the verifier's report, and confirmation that all necessary documentation is in place.~~

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**Commentary:** At the outset, state agencies may be more actively involved in project verification and certification. Over time, agencies may reduce their engagement in certifying individual projects unless a compelling reason to do so arises.

#### Areas for additional investigation:

- Similar to the second bullet above, agencies should reflect on how deeply they wish to engage in certification. WP and TFT will consider the pros and cons of various levels of engagement for future option memos.

**Commented [BC18]:** We got the same areas for investigation as bullet 2 above, yeah?

### 8.1 – 8.3 Registration

NPDES permit monitoring reports and other required information is generally available to the public for inspection, review, and oversight through agency websites. Trades of credits associated with such permits must also be available to the public for similar purposes. Credit registration is a transparent way of providing this information. Disclosure and easily searchable version of a permittee's ledger of credits allows agencies, the public, and permittees themselves to be sure that trades are helping to meet effluent limits, and that credits are not being used for more than one purpose.

**Draft Best Practice – Public disclosure and serialization of credits:** *Once verified and certified, credits must be disclosed on a publicly available website or credit registry. Permittees must use a website or registry approved or designated by the applicable state water quality agency and/or EPA. Each credit must be assigned a unique identifier or serial number through the registration process. The website or registry should allow the public to search for a particular permittee, watershed, or trading program at no cost, and should display credits sold and used for permit compliance.*

~~**Draft Best Practice – Public disclosure and serialization of credits:** *Once verified and certified, credits must be disclosed on a publicly available website or credit registry. Permittees must use a website or registry approved by EPA and/or the applicable state water quality agency. Each credit must be assigned a unique identifier or serial number through the registration process. The website or registry should allow the public to search for a particular permittee, watershed, or trading program at no cost, and should display credits sold and used for permit compliance.*~~

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#### **Commentary:** Consistent

**Commentary:** “Easy and timely public access to information is necessary for markets to function efficiently and for the public to monitor trading activity.” 68 Fed. Reg. at 1612. As such, consistent and transparent information on credits and trades should be available online to allow the regulators and the general public an easy method for tracking a permittee's trading activity and compliance (i.e. preventing double-counting, or use of inconsistent nomenclature to identify credits). Utilizing common infrastructure is a way for multiple trading programs to easily identify activity occurring in their programs and all the documentation associated with those activities. Permittees and state agencies may also host duplicate copies of this information on their websites.

#### **Areas for additional investigation**

- Consider and delineate the implications of a state- or EPA- designated or supported registry for water quality trading projects for state agency attendees.

~~**Draft Best Practice – Information for public disclosure:** *Each website or registry listing for a credit-generating project must provide: (1) project latitude and longitude location, (2) credit quantity, and (3) identities of the parties to the credit transaction and correlating permit (if applicable). The listing should also provide, to the extent practicable: (1) verification and certification reports; (2) monitoring and stewardship plans; and (3) project design and corroborating eligibility information. Sensitive or proprietary information that is not required for credit transparency (e.g., private landowner names and addresses, unrelated third party contact information, and/or proprietary or confidential information) may be redacted or kept confidential.*~~

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- What criteria would a website or registry need to meet to provide easy and timely access to information? What are the right trade-offs between security of information, control of information, costs to operate a system, etc...?

**Draft Best Practice – Information for public disclosure:** *“EPA encourages states and tribes to make electronically available to the public [1] information on the sources that trade, [2] the quantity of credits generated and used on a watershed basis, [3] market prices where available, and [4] delineations of watershed and trading boundaries.” 68 Fed. Reg. at 1612. In addition, each website or registry listing for a credit-generating project must provide: (1) project latitude and longitude location, and (2) the identities of the parties to the credit transaction and correlating permit (if applicable). The listing should also provide, to the extent practicable: (1) verification and certification reports; (2) monitoring and stewardship plans; and (3) project design and corroborating eligibility information. Sensitive or proprietary information that is not required for credit transparency (e.g., private landowner names and addresses, unrelated third party contact information, and/or proprietary or confidential information) may be redacted or kept confidential.*

**Commentary:** Many of the materials included in the draft best practice may exceed what is currently required of regulated entities under NPDES permit monitoring reports and other documents.

Some Nonetheless, “[t]his [type of] information is necessary to identify potential trading opportunities, allow easy aggregation of credits, reduce transaction costs and establish public credibility.” 68 Fed. Reg. at 1612. However, some documents used by a verifier to approve credits may also contain sensitive or proprietary information. The registration process needs to balance discretion related to sensitive or proprietary information with the need to provide transparency. There need to be explicit guidelines around which information should be confidential, which information should be actively posted to the registry, and which information is subject to public review but not actively posted to the registry.

#### **Areas for additional investigation**

- Consider and delineate which documents are required under NPDES permit monitoring reports and which should be included in a website or registry consistent with the objectives of the Draft Best Practice above.